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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,537

07/18/2005

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CONDA.00029

7042

22858 7590 06/04/2009
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EXAMINER

CHANG, RICK KILTAE

ART UNIT

PAPER NUMBER

3726

MAIL DATE

DELIVERY MODE

06/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,537	Applicant(s) HIRATA ET AL.	
	Examiner Rick K. Chang	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/5/09</u> . | 6) <input type="checkbox"/> Other: _____ |

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyama Kazuya (JP 2001-171472) in view of Kraft et al (US 5,308,370).

Re claims 1, 6: Kazuya discloses applying a contact surface pressure between portions of the wire to be bonded together (Solution, lines 6-7); and maintaining the contact surface pressure as equal to or higher than a predetermined level that is set (Solution, lines 6-7), except for maintaining the contact surface pressure as equal or higher than a predetermined level that is set in accordance with a sintering condition and conducting the sintering in this state, such that each bonding portion of the wire has a bonding strength equal to or greater than 4 N. The applicants stated in his remarks as follows: Kazuya discloses a filter for an airbag inflator. This filter is made from a metal wire (this is examiner's remark: 0 contact surface pressure in an unbent state) that is wound into a cylindrical shape around a jig with a specific tension (this is examiner's remark: a tension of 2-5 kgf is higher than 0) and then sintered.

Kraft discloses maintaining the contact surface pressure as equal or higher than a predetermined level (before mesh 54 is sintered onto mat 52, the contact surface pressure is 0; after winding, the contact surface pressure is higher than 0) is that is set in accordance with a sintering condition and conducting the sintering in this state (col. 7, lines 63-64).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kazuya by maintaining the contact surface pressure as equal or higher than a predetermined level that is set in accordance with a sintering condition and conducting the sintering in this state, as taught by Kraft, for the purpose of preventing separation between layers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide each bonding portion of the wire has a bonding strength equal to or greater than 4 N, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re aller*, 105 USPQ 233.

“When there is design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill as a good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show it was obvious under 35 U.S.C. 103.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742, 82 USPQ2d 1385, 1396 (2007). Therefore, it would have been obvious to maintain the contact surface pressure as equal or higher than a predetermined level that is set in accordance with a sintering condition and conducting the sintering in this state in order to ensure layers do not come apart for its design purposes.

Re claims 2, 7: Kazuya and Colburn teach the invention as described with respect to claim 1 and the welding temperature and time are inherent and well known in the art during welding.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a welding temperature and a welding temperature to satisfy the inequality of an equation disclosed in claim 2, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re aller*, 105 USPQ 233.

Re claims 3, 8: Kazuya discloses that the filtering member is a coil type filter in which the wire is wound in a layered manner for forming a mesh, and the contact surface pressure is produced by tension applied to the wire during winding of the wire (see Fig. 1 and Solution).

Re claims 4, 9: Kazuya discloses that a winding end of the wire is fixed while the tension is applied to the wire during winding of the wire (it is inherent and well known in the art that a winding end of the wire is fixed; otherwise, it is impossible to put any tension to the wire during winding. Further, the second, third and subsequent windings will fix the first winding, which can be considered as a winding end of the wire, since the windings are under constant tension).

Re claims 5, 10: Kazuya discloses that the contact surface pressure is adjusted by changing the tension applied to the wire during winding of the wire (a tension of 2-5 kgf).

Response to Arguments

3. Applicant's arguments filed 3/12/09 have been fully considered but they are not persuasive.

Before the wire was wound, there was no pressure applied to the wire (unbent). During the winding, Kazuya discloses that the wire had to be under pressure (a tension of 2-5 kgf). A tension of 2-5 kgf is higher than 0.

Interviews After Final

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4. Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

Conclusion

5. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rick K. Chang/

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Primary Examiner, A.U. 3726

RC

June 4, 2009